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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

MCKENZIE FLYFISHERS;
STEAMBOATERS,

Plaintiffs,

v.

BRUCE MCINTOSH, SCOTT PATTERSON,
OREGON DEPARTMENT OF FISH AND
WILDLIFE, JOHN EISENHAUER, U.S.
ARMY CORPS OF ENGINEERS,

Defendants.

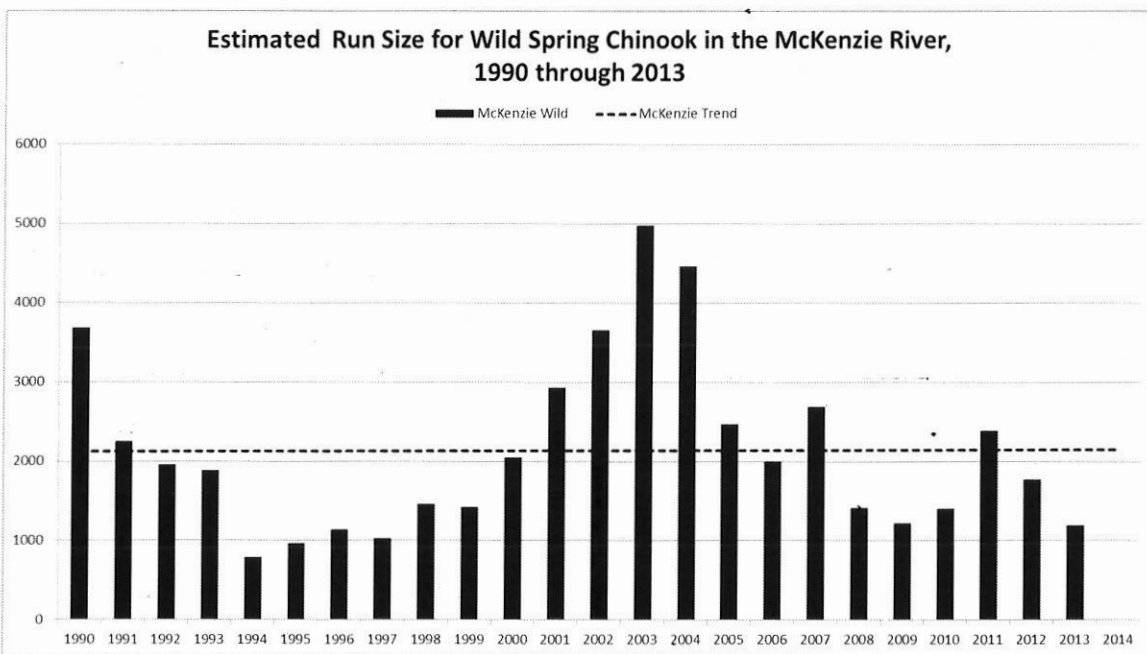
Case No. 6:13-cv-02125-TC

DECLARATION OF JEFFREY ZILLER IN
SUPPORT OF STATE DEFENDANTS'
CROSS-MOTION FOR SUMMARY
JUDGMENT AND OPPOSITION TO
PLAINTIFFS' MOTION FOR SUMMARY
JUDGMENT

I, Jeffrey Ziller, declare:

1. I am a District Fish Biologist at the Oregon Department of Fish and Wildlife ("ODFW"). I am responsible for fish management in the South Willamette Watershed District, which includes the McKenzie River. I make this declaration from my personal knowledge and would testify to the following if called as a witness at trial.

2. **Population:** The Plaintiffs have stated that runs of McKenzie River spring Chinook salmon have decreased significantly in the past decade. Actually, the run size for natural origin McKenzie River spring Chinook has been variable but the trend line for the population is relatively flat over the past 20 to 25 years. In 2002 and 2003, the McKenzie experienced some of the largest runs in 30 years. Because plaintiffs used those high points as their starting points, this makes the population trend line look like a declining one. A longer-term view, as shown in the graph below, provides a more accurate picture.



Moreover, a comparison to the wild spring Chinook run sizes in other basins in Oregon demonstrates that the fluctuations experienced in the McKenzie over the past 20-25 years were not unique and shows a similar peak in run strength during the early 2000's.

3. **Pre-1996 Fish Marking:** Plaintiffs have suggested that it is impossible to make accurate counts of wild and hatchery fish returns before 2002 because the hatchery spring Chinook released before 1996 were not all adipose fin-clipped. Although it is true that hatchery fish were not all marked with adipose fin-clips or by other means before 1996, ODFW did mark

a portion of the hatchery spring Chinook released into the McKenzie River basin every year from brood years 1984 through 1995. We marked fish with an externally visible adipose fin-clip. The mark rate was 3 to 7% from 1984 through 1988, and 10 to 16% from 1989 through 1995, except that the 1992 brood was marked at a 98% rate. In the years when fish were returning from partially-marked releases, we counted adipose fin-clipped and non-adipose fin-clipped fish at the Leaburg Dam Fish Ladder and at McKenzie Hatchery to develop an estimate of wild and hatchery fish above Leaburg Dam. We used the percentage of adipose fin-clipped adult fish returning to McKenzie Hatchery to expand the number of adipose fin-clipped spring Chinook salmon we observed at the Leaburg Dam Fish Ladder. This procedure allowed us to estimate total number of hatchery fish that passed Leaburg Dam. For example, if 2,000 spring Chinook salmon returned to McKenzie Hatchery and 200 had adipose fin-clips, the mark rate would be 10%. For that same year, if we counted 40 adipose fin-clipped spring Chinook salmon at Leaburg Dam Fish Ladder, we would assume that we observed and counted only 10% of the hatchery fish passing the dam. We would therefore have tallied 400 hatchery-reared spring Chinook salmon as passing Leaburg Dam. If a total of 3000 spring Chinook salmon had passed through the fish ladder, our run size estimate would be that 400 hatchery and 2,600 wild spring Chinook salmon passed through the ladder. Although no estimate is perfect, I am confident that our hatchery and wild spring Chinook salmon estimates are close to the actual numbers for the run years when only a portion of the hatchery fish returning were marked.

4. **Trail Bridge Dam outplanting:** ODFW outplants adult hatchery spring Chinook salmon above EWEB's Trail Bridge Dam in the McKenzie basin and has done so since 1997. Originally, we outplanted there for two reasons: (1) to provide food for ESA listed bull trout above the dam and to (2) to provide ocean derived nutrients (from salmon carcasses) to the watershed. After 2007, two additional reasons were added for the outplants; (3) to provide a source of returning fish to evaluate the effectiveness of the fish ladder proposed to be built by EWEB on hydro relicensing of Trail Bridge Dam and related facilities by the Federal Energy

Regulatory Commission and (4) to provide fish to begin to re-seed the habitat above Trail Bridge Dam. In 2008, a number of parties that include ODFW, National Marine Fisheries Service, EWEB, and plaintiff McKenzie Flyfishers, among others, entered into a settlement agreement relating to requirements that must be met by EWEB with hydropower relicensing. In this 2008 Carmen-Smith Hydroelectric Project Relicensing Settlement Agreement, EWEB agreed to provide upstream and downstream passage at Trail Bridge Dam, and increase in-stream flows in the diverted reaches of the McKenzie River. EWEB also agreed to construct and maintain spring Chinook salmon spawning and rearing habitat in Smith River including reduction of spill and ramping in the portion of the Smith River Bypass Reach which is above the Trail Bridge Dam and related facilities. The settlement agreement can be found on the EWEB website at www.eweb.org/public/documents/energy/settlementAgreement.pdf, but the relevant portions relating to the fish passage facilities are attached to this declaration as Exhibit 1. The required timelines for construction are keyed to the hydro relicensing, which has not yet occurred. But relicensing could occur as soon as late 2015, which would mean that construction of fish passage facilities would occur soon after. Given the 4 to 6 year lag time from fish release to fish return, it is important that we continue to outplant fish above Trail Bridge Dam so that fish will be returning at and after construction to reestablish natural production.

5. At the present time, there is no fish passage for returning adults at Trail Bridge Dam and therefore there are no runs of fish passing the dam. EWEB and the Settlement Parties expect spring Chinook salmon from McKenzie Hatchery to be released above Trail Bridge Dam to provide the genesis of a salmon run as construction of fish ladders and downstream migrant facilities commence. The number of adult Chinook required for this project will be a minimum of 120 fish (60 pairs) per year prior to the construction of the Chinook salmon spawning and rearing habitat in Smith River. These fish will be required during the next 3 to 5 years depending on EWEB's construction schedule. After the spawning and rearing habitats are constructed, 400 to 800 spring Chinook salmon adults will be needed per year for at least one life

—cycle (6 years). A very similar reintroduction scenario is being implemented by ODFW and the U.S. Army Corps of Engineers in the South Fork McKenzie River above Cougar Dam.

I declare under penalty of perjury that the foregoing is true and correct.

EXECUTED on December 31, 2014.



JEFFREY ZILLER

Exhibit B

Carmen-Smith Hydroelectric Project (FERC No. 2242)

Aquatics Management Plan

Submitted by:

Eugene Water & Electric Board

4 ELEMENTS

4.1 Fish Passage

4.1.1 Passage narrative standards

EWEB shall design, construct, operate and maintain, as applicable, the Trail Bridge Fish ladder and tailrace barrier; the Trail Bridge Dam fish screen and bypass system; access to Sweetwater Creek; fish removal from the Trail Bridge spillway pool; minimum gate opening at the Trail Bridge spillway; and upstream passage through the Carmen-Smith spawning channel for the purpose of supporting safe, timely, and effective passage without serious injury or mortality for migrating salmonids.

4.1.2 Upstream passage at Trail Bridge Dam

In consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, EWEB shall design, construct, operate, and maintain a right bank exit volitional fish ladder and tailrace barrier at Trail Bridge Dam consistent with MWH Americas, Inc. (2007) draft drawings (Drawings ES-1, 2, 3, and 4; C-1, 2, 3 and 9; S-1, 12, 13, 14, 19, 20, 21, 25, 26, 27, 39 and 41; M-1, 2, and 7) and any subsequent revisions thereto and according to the criteria document entitled *Anadromous Salmonid Passage Facility Design*, developed by National Marine Fisheries Service, Northwest Region (2008), for the purpose of supporting safe, timely, and effective upstream passage of fish. EWEB shall include in the design, construction, operation, and maintenance for the ladder:

- a) 9 inch steps,
- b) 8 foot x 8 foot pools,
- c) 4-foot-wide transport channels,
- d) a 6-inch step entrance,
- e) a 12-inch step entrance,
- f) a fish counting and observation station, and
- g) a configuration of components designed to allow passage of Pacific lamprey.

- 1) EWEB shall operate and maintain the Trail Bridge Dam tailrace barrier as follows:

Period of time	Tailrace barrier position
1 May to 31 October	Full up position (3.5 feet)
1 November to 30 April	Less than 2,000* cfs = inflated to 1.5 feet
	Equal to or greater than 2,000 cfs = full down position

* (measured at USGS gage 14158850 [downstream of Trail Bridge Dam]; approximates the 5% exceedence flow for February and the Trail Bridge Power Plant capacity)

To ensure fish passage effectiveness, EWEB may lower the Trail Bridge Dam tailrace barrier at any time for the purpose of flushing debris accumulated on or above the barrier.

- a) EWEB does not anticipate needing to flush debris from 1 May to 31 October; however, if flushing is needed, EWEB shall make observations and report to the Fish Working Group whether or not spring Chinook and/or bull trout moved above the barrier. If Chinook and/or bull trout are observed above the barrier, EWEB shall, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, develop a plan to safely move the Chinook and/or bull trout to downstream of the barrier. EWEB shall leave the weir in the fully lowered position only for as long as reasonably necessary to release or to flush debris that is present. EWEB shall not be subject to the flow fluctuation restrictions in Section 4.4.4.1 of this Aquatics Management Plan during operation of the tailrace barrier weir to release or to flush debris from upstream of the barrier.
- 2) Within 3 years after New License issuance, EWEB shall prepare in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, and file with the Commission a plan and schedule for design and construction of the Trail Bridge Dam fish ladder and tailrace barrier. Upon Commission approval, EWEB shall implement the plan and schedule. Within six years after New License issuance, the New Licensee shall complete construction of the Trail Bridge Dam fish ladder and tailrace barrier.
 - 3) EWEB shall conduct hydraulic monitoring as provided in Section 4.1.9 below and biological monitoring as provided in Section 4.1.10 below to verify that the fish ladder functions as designed. Within 12 months after EWEB's completion of construction of the Trail Bridge Dam fish ladder, EWEB shall prepare in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, and file with the Commission a plan(s) to conduct hydraulic and biological monitoring of the Trail Bridge Dam fish ladder (Monitoring Plan). Upon Commission approval, EWEB shall implement the

Monitoring Plan. Within 6 months after EWEB's completion of the implementation of the Monitoring Plan, EWEB shall prepare a report documenting the results of the monitoring and the data collected. After consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, EWEB shall file the report with the Commission. If EWEB's implementation of the Monitoring Plan verifies that the fish ladder functions as designed, no further hydraulic or biological monitoring by EWEB is required.

- 4) Within 12 months after EWEB's completion of the implementation of the Monitoring Plan for the Trail Bridge fish ladder, EWEB shall prepare in consultation with the FWG and subject to approval by the Fish Agencies and the USDA Forest Service, and file with the Commission an Operations and Maintenance Plan to provide for the operation of the fish ladder. EWEB shall base the Operations and Maintenance Plan on the Anadromous Salmonid Passage Facility Design, February 2008, developed by National Marine Fisheries Service Northwest Region (NMFS 2008) and the results of EWEB's implementation of the Monitoring Plan. Upon Commission approval, EWEB shall implement the Operations and Maintenance Plan.

4.1.3 Downstream passage at Trail Bridge Dam

- 1) In consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, EWEB shall design, construct, operate and maintain a vertical fixed plate V-screen and bypass system for downstream passage of fish past Trail Bridge Dam consistent with MWH Americas, Inc. (2007) draft drawings (Drawings ES-1, 2, 3, 4; C-6, 7, 8, and 9; S-49, 50, 51, 55 and 57; M-12 and 13) and any subsequent revisions thereto, and according to the criteria document *JUVENILE FISH SCREEN CRITERIA*, revised 16 February 1995, developed by National Marine Fisheries Service Environmental & Technical Services Division Portland, Oregon for the purpose of supporting safe, timely, and effective downstream passage of fish at Trail Bridge Dam (NMFS 1995). Within six years after New License issuance, the licensee shall complete construction of the vertical fixed plate V-screen and bypass system.
- 2) EWEB shall conduct hydraulic monitoring as provided in Section 4.1.9 and biological monitoring as provided in Section 4.1.11 to verify that the Trail Bridge Dam fish screen and bypass system function as designed. Within 12 months after EWEB's completion of construction of the fish screen and bypass system, EWEB shall prepare in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, and file with the Commission a plan(s) to conduct hydraulic and biological monitoring of the fish screen and bypass system (Monitoring Plan). Upon Commission approval, EWEB shall implement the Monitoring Plan. Within 6 months after EWEB's completion of the implementation of the Monitoring Plan, EWEB shall prepare a report

documenting the results of the monitoring and the data collected. After consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, EWEB shall file the report(s) with the Commission. If EWEB's implementation of the Monitoring Plan verifies that the fish screen and bypass system functions as designed, no further hydraulic and biological monitoring by EWEB is required.

- 3) Within 12 months after EWEB's completion of the implementation of the Monitoring Plan for the Trail Bridge fish screen and bypass system, EWEB shall prepare, in consultation with the FWG and subject to approval by the Fish Agencies and the USDA Forest Service, and file with the Commission an Operations and Maintenance Plan to provide for the operation of the fish screen and bypass system. EWEB shall base the Operations and Maintenance Plan on the JUVENILE FISH SCREEN CRITERIA, revised 16 February 1995 developed by National Marine Fisheries Service Environmental & Technical Services Division Portland, Oregon (NMFS 1995) and the results of EWEB's implementation of the Monitoring Plan. Upon Commission approval, EWEB shall implement the Operations and Maintenance Plan.

4.1.4 Passage at Carmen Power Plant

- 1) EWEB shall conduct an evaluation which will be used to construct, if needed, an adaptive approach for fish passage at the Carmen Power Plant tailrace by monitoring fish after spring Chinook salmon migrate up the Trail Bridge Dam fish ladder and in Trail Bridge Reservoir above Trail Bridge Dam to determine if there is significant delay, substantial mortality, or serious injury to Chinook salmon and/or bull trout associated with upstream passage past the Carmen Power Plant tailrace as a result of its facilities or operations. Within 6 months after EWEB, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, determines that a sufficient number of unmarked adult Chinook salmon are migrating upstream through the Trail Bridge Dam fish ladder EWEB shall prepare, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, and file with the Commission a plan and schedule for determining if significant delay, substantial mortality, or serious injury to fish associated with upstream passage past the Carmen Power Plant tailrace is occurring as a result of its facilities or operations. Upon Commission approval, EWEB shall implement the plan and schedule. The criteria for determining significant delay, substantial mortality, and serious injury are:
 - a) Standard for significant delay of spring Chinook salmon: The operation of the Carmen Power Plant will not delay "staged and spawn-ready" spring Chinook salmon from migrating to spawning habitat in the tributaries of Trail Bridge Reservoir by more than 48 hours as provided below. Potential delay at the Carmen Power Plant will be evaluated as follows,